

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for production of compound oxide particles, comprising:

contacting an organic phase having dissolved therein an organic compound of a metal alkoxide or an acetonate-metal complex, the metal of said metal alkoxide or acetonate-metal complex being hereinafter referred to as a first element, with an aqueous phase containing a second element as an ion, and a surfactant to form a microemulsion, in which a hydroxide of said first element is produced by a hydrolysis reaction of said organic compound at the interface between said organic and aqueous phases while incorporating said second element in the hydroxide product,

adding an alkali to the microemulsion to adjust the pH for colloid aggregation adjustment and maturing to form a matured product, and

firing the resulting matured product to produce particles of a compound oxide of said first element and second element.

2. (Previously Presented) A process for production of compound oxide particles according to claim 1, wherein said aqueous phase further contains a third or additional elements as ions, said product further contains a third or additional elements, and the obtained compound oxide is a compound oxide of the first, second and third or additional elements.

3. (Canceled)

4. (Previously Presented) A process for production of compound oxide particles according to claim 1, wherein the size of the aqueous phase of the water-in-oil type microemulsion is in the range of 2-40 nm.

5. (Previously Presented) A process for production of compound oxide particles according to claim 2, the second and/or third or additional element ions are ions of inorganic acid metal salts.

6. (Currently Amended) A process for production of particles of a compound oxide of zirconium and cerium, comprising:

preparing a microemulsion comprising an aqueous phase dispersed in an organic phase, said organic phase having dissolved therein a zirconium alkoxide, said aqueous phase containing a cerium salt, said aqueous phase being emulsified in said organic phase with a surfactant;

contacting said organic phase with said aqueous phase to produce a product of zirconium hydroxide by hydrolysis reaction of the zirconium alkoxide at their interface between said organic and aqueous phases while incorporating the cerium element in the product,

adding an alkali to the microemulsion to adjust the pH for colloid aggregation adjustment and maturing to form a matured product, and

firing the resulting-matured product to produce particles of a compound oxide of the first element and second element.

7. (Previously Presented) A process for production of an exhaust gas purifying catalyst carrier, characterized by producing the exhaust gas purification catalyst carrier by a production process according to claim 1.

8. (Previously Presented) A process for production of an exhaust gas purifying catalyst carrier, characterized by producing the exhaust gas purification catalyst carrier by a production process according to claim 2.

9. (Canceled)

10. (Previously Presented) A process for production of an exhaust gas purifying catalyst carrier, characterized by producing the exhaust gas purification catalyst carrier by a production process according to claim 4.

11. (Previously Presented) A process for production of an exhaust gas purifying catalyst carrier, characterized by producing the exhaust gas purification catalyst carrier by a production process according to claim 5.

12. (Previously Presented) A process for production of an exhaust gas purifying catalyst carrier, characterized by producing the exhaust gas purification catalyst carrier by a production process according to claim 6.

13. (Previously Presented) A process for production of compound oxide particles according to claim 1, wherein the compound oxide particles have a composition that is uniform at the atomic level.

14. (Previously Presented) A process for production of compound oxide particles according to claim 6, wherein the compound oxide particles have a composition that is uniform at the atomic level.